

UTILIZATION PATTERN, SAFETY PROFILE AND COST ANALYSIS OF ANTIMICROBIALS PRESCRIBED IN AN INTENSIVE CARE UNIT OF A TEACHING HOSPITAL

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Background:

Critically ill patients admitted to intensive care units(ICUs) are highly susceptible to infections because of predisposing illness and the use of invasive and surgical procedures and are, therefore, exposed to high antimicrobial pressure. Use of antimicrobial in the ICU must follow best clinical practice, if the emergence of resistance to antimicrobials is to be minimized.

Aims and objectives:

To assess the utilization pattern, safety profile and cost analysis of antimicrobials in Medical ICU of the institution.

Materials and Methods:

A prospective cross sectional observational study was undertaken from February 2016 to February 2017 in a teaching hospital. Standard case record form was used to collect the information regarding demographic data, clinical data, antibiotic use and adverse drug reactions. Antimicrobial use was

analyzed using Anatomical Therapeutic Chemical (ATC) classification/Defined Daily Dose (DDD) system.

Results:

Totally 123 patients in the ICU were included in the study. These includes 82 men and 41 women. The average age of the patient was 57.7 years. Majority patients were admitted with respiratory infection (23.49%). The average number of drugs prescribed per patient was 7.63. Total drug utilization in terms of DDD/1000 patients in ICU/day was 26.02. Ceftriaxone + metronidazole (15.44%) were the most common empirical regimen used as 2AMAs, whereas with single drug ceftriaxone (21.13%) was most commonly used. The maximum ADRs observed were probable according to WHO causality assessment

Conclusion:

Majority of patients were prescribed AMAs as monotherapy or combined therapy for control of infections during Intensive Care management. Over all extensive polypharmacy among AMAs was noticed.

Key words:

Antimicrobial agents, Drug utilization, ICU, Defined Daily Dose